



Moog Matriarch Ctrlr panel documentation and instructions

V2.0- 2022-11-14



Introduction

Hi! Thanks for having purchased this Ctrlr Moog Matriarch panel!

The panel is only a patch loader/saver on computer as the Moog Matriarch does not support the load/save of programs by sysex dump exchange. It supports the manipulation of some program parameters by Midi CC messages but far from all parameters are covered (only the ones described on pages 18 and 19 of the Matriarch v1.2.3 Firmware update manual).

It is also possible to exchange sysex messages for the Global parameters and this is also available in the panel.

The panel will thus allow you to save and retrieve Matriarch patches on your PC but gives you also the possibility to exchange them with other users as they are stored as sysex files.

The look and feel is respected (as well as the selection between the classical colored and dark series layout) but of course it would be stupid to not benefit of the computer possibilities. Therefore, you also get a display of the current parameters value, a graphic display of the envelopes, the ability to store and indicate the input/output patches, to draw patch cables on the panel, etc...

Despite careful testing it is possible that some bugs remain. Please contact sunny.synths@gmail.com if you find one so they can be corrected as soon as possible.

In the same spirit, contact sunny.synths@gmail.com as well if you would like some enhancement on the panel.

By that, please have a look on this manual to have an idea of the way of using it and its features. Enjoy making music with your Moog Matriarch and have fun!

Dominique (*Sunny Synths*)

About this v2.0 version

This 2.0 version provides the following changes to the panel:

- Patch cables drawing directly on the main panel
- Ability to switch between full cables or cable plugs
- Possibility to set Cables transparency. 0% transparency is plain
- Support for double inputs / double outputs
- Setting the root of the File browser is now working in all cases

Important information to the users of the 1.x version

1. Due to the addition of the handling of double inputs/outputs it is needed to add the image “Patch circle numbered 15 duo.png” in the temporary folder of the patch mapper:
 - Windows: copy the image to the ...ySIE folder located within the C:\Users\your_username\AppData\Roaming\Moog Matriarch hidden folder
 - MacOS: copy the image to the ...ySIE folder located within the Moog Matriarch folder in your personal Library/Preferences folder. It is also a hidden folder that you can see/reach by using the Finder and clicking on Go while pressing the Option (Alt) key.
 - (optional) Delete the Patch circle numbered 15.png image
 - Copy then use the provided .exe file as usual. All previous settings are kept
2. DAW presets saved in DAW (thus, not the external .syx presets) should be resaved to avoid some graphical issues. They don't need to be changed; just resaved.

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It is possible that the top row buttons are not responding after the initial installation. Simply close the program and restart it. The issue should be solved.

For the installation of the plugins, please refer to Installing and using the Matriarch panel as plugin on page 3431 further in this manual.

Features

You will find the following features in the Moog Matriarch panel:

- Moog Matriarch interface with same look as actual synthesizer
- Displays all patch points from the main synth panel but also all outputs from the rear
- Button to switch the layout between the colored and the Dark editions
- Bidirectional communication with actual Matriarch synthesizer for all parameters supporting CC# Midi communication (pages 18 and 19 of the Matriarch v1.2.3 Firmware update manual)
- Top row of support “screens” with old look
- Visual feedback by using “LED” ring buttons and indication of the parameter value
- Envelope graphs handled by mouse or classical ADSR rotary encoders
- Load / Save programs from individual .syx files
- Automatic change of all CC# parameters on actual synthesizer at program load
- Program settings management (a selection of Global settings but stored at program level)
- Global settings management (receive all then individual update)
- Easy program renaming
- Display and export of program parameters as text file
- Ability to describe 15 input/output colored patch cables with different sources/destinations
- Patch cables drawing on main panel with transparency setting
- Ability to display full cables or cable plugs
- Programs have a name, author, save date and description. They can be associated to a category
- Ability to describe the usage of each program in a step by step mode (up to 15 steps)
- Browser of the files on the disk
- Patch sheet tab with patch sheet for Matriarch and other gear
- Author and save date
- External synths and FX chain
- Display of current precise parameter value when clicking on rotary encoders
- Memorized panel zoom
- Automatic reading of wav/aif*/aac*/mp3* files associated to a patch (*MacOS only)
- Manual/Automatic reading of any wav/aif*/aac*/mp3* file (*MacOS only)
- Extras Midi CC controller number for the buttons without a Moog assigned number so you can adjust them from a hardware controller (still no impact on the synth of course and unfortunately).

Communication with your Moog Matriarch synth



If you don't want to manage the parameters manageable by Midi CC# or if your Moog Matriarch is not connected by USB or Midi to your PC then you can skip this section.

Preliminary info

As mentioned in the introduction of this manual, the Moog Matriarch does not support the load/save of programs by sysex messages but allows the manipulation of some program parameters by Midi CC messages.

The panel is working in a bidirectional fashion for those parameters managed by CC#: modifying a knob on the panel changes the corresponding parameter value on the synth while changing on the synth is making the corresponding button turn on the panel with the associated value displayed.

You can also manage all global parameters by sysex. This has been included in the panel and you will need to setup the bidirectional communication to get that possibility.

Setting the Midi connection

You will access the Midi settings by going to the Midi menu where you will have to set the Midi Input and Midi Output channels:

- Connect the Moog Matriarch by USB to your PC or Midi Din (Output from your interface to Input on the Moog Matriarch AND Input from your interface to Output on the Moog Matriarch)
- Power the Moog Matriarch On
- Start the Moog Matriarch panel
- In the **Midi** menu, select **Input – Device Moog Matriarch**
- In the **Midi** menu, select **Input – Channel 1** (set this to the Midi channel of your Moog Matriarch)
- In the **Midi** menu, **Controller – Device** should normally stay to -- None
- In the **Midi** menu, select **Output – Device Moog Matriarch**
- In the **Midi** menu, select **Output – Channel 1** (set this to the Midi channel of your Moog Matriarch)



(picture showing the Grandmother – to be replaced)

Testing the Midi connection



To secure a good bidirectional communication between the synth and the panel, **always start your Moog Matriarch first** then open the panel. If issues, close the panel and restart it.

We can now test the Midi connection:

- In the **Tools** menu, select **Midi monitor** and in the new monitor popup check **On Monitor input** and **Monitor Output** in the **View** menu



- Play a note on the synth to hear the sound
- Turn the Modulation Rate (CC 3) or one of the Oscillator Frequency (CC 16-18) buttons on the panel and listen how it affects the sound. You can also turn Arp/Seq Rate (CC 8) but then with a running arp or sequence.
- The Midi Monitor panel should show the CC# messages that are exchanged in the top Output part
- Turn the Modulation Rate or Oscillator 2 Frequency buttons on the synthesizer and checks that the corresponding button is turning on the panel and that the top screen shows the value changing
- The Midi Monitor panel should show the CC# messages that are exchanged in the bottom Input part
- You can also try with the triple position switches 😊



Way of working

As you will discover by yourself, the usage of the panel is pretty straightforward but there are anyway different specific things you should know... 😊

Using the buttons and modifying parameters

You modify parameters using rotary encoders by clicking on the button then moving the mouse cursor vertically up or down.



You can also modify any rotary encoder based parameter by doing a mouse hover on the button then using the mouse scroll wheel.



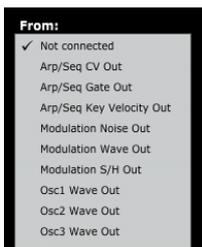
Switches are modified by simply clicking on them. They will go through the three positions as the actual switch on your synth



Momentary push buttons are activated by simply clicking on them (what a surprise...). They will momentary flash.



Permanent toggle buttons are activated by simply clicking on them (what a surprise...). Some are displayed in some kind of recessed way as Legato Glide in this picture; others are just staying lit as the Color button



Parameters presented as pulldowns are modified by opening the pulldown and selecting one of the pull-down items.

Quick reset to default value

Most of the rotary encoders have default values set and you can quickly revert to this preset default value by **double-clicking on the button**. Try with the Arp/Seq Rate or Attenuators encoders for example.

Opening and closing the panel

When closing the panel (either by using **File – Quit** or by clicking on the upper right red cross) the file of the last program loaded or saved is stored.

When opening the panel, it is checked if the last file used still exists (could have been renamed or moved or deleted). If not found, the Init program is loaded (in the same way as when loading the panel for the first time). The last program is restored if it is found so you can continue your work where you left it.

This behavior can be prevented by setting the **No load at panel load** button to ON in **Library and Info** tab.



When loading the last program used at panel load, it can be that your Matriarch synth will freeze. It may be due to a problem with the Midi buffer. If this is happening several times, it is better to set the switch ON to not load the last program and use the panel as it was left.

With No load at panel load set to OFF: the last used file is restored

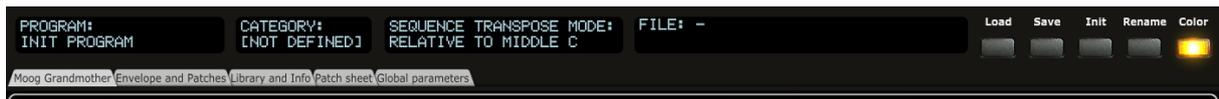


With No load at panel load set to ON: the panel is restored as you left it (all buttons in same position but as you can see the LCD screens are reset)



The same is done with the root folder of the File browser (see [Library and Info tab](#) on p20).

Top panel area



In the top panel area you find 4 feedback “screens”, 5 buttons and 5 tabs:

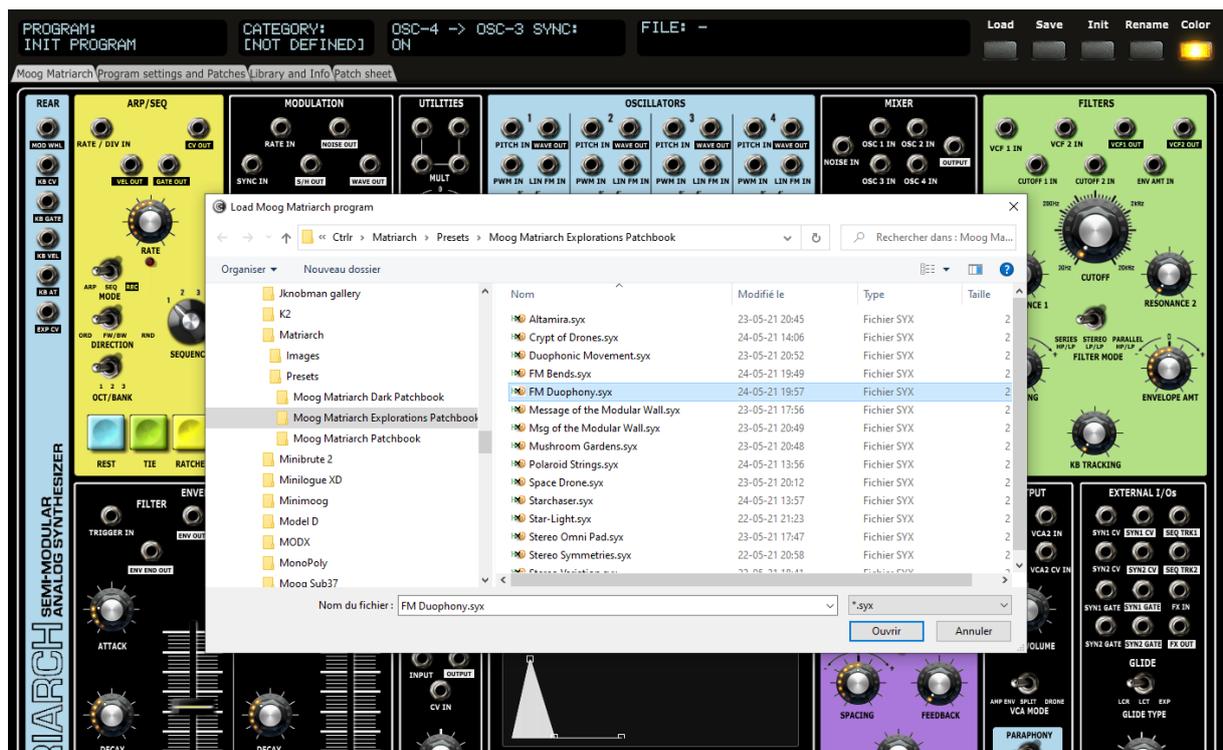
- The first screen displays the **name** of the current program
- The second screen displays the **category** of the current program
- The third one indicates the parameter currently modified and its value
- The fourth one displays the latest sysex file loaded, its author and the save date
- The **Load** button allows loading a sysex file from disk
- The **Save** button saves the current program to a sysex file on disk
- The **Init** button reset all parameters to *a Basic program*
- The **Rename** button allows renaming the current program
- The **Color** button allows switching between the colored and the Dark Series layout
- The **Moog Matriarch** tab displays the synth
- The **Program settings and Patches** tab displays Program settings (a selection of Global settings saved at Program level) and Arp/Seq parameters. It also allows the registration of 15 different input/output patches, the identification of two external synths and one FX chain. In this tab you can modify the Category, the Author, the Description and enter a step by step usage of the current program. You will also be able to modify some Global settings
- The **Library and Info** tab provides the file browser that allows the selection of sysex files or the ability to listen to wav files, the display and the export of the parameters of the current program as text file and gives About info of the panel. It is also here that you will find the manual panel zoom that is memorized. In this tab you can also manage all the Global settings besides the Arp/Seq related ones.
- The **Patch sheet** tab displays automatically the Moog Matriarch patch sheet with all parameter values but with the addition of author, date, external synths and FX chain names , the Program and Glide settings and 12 external input/output connections

Loading a Moog Matriarch program

The panel loads and saves the program parameters as a 1500 bytes sysex file (.syx) from/to your computer.

Clicking the **Load** button opens a classical Open file dialog where you can select the file to load. An internal check is done to verify that the file is compatible with the Moog Matriarch panel. The parameters are loaded, the top screen is showing the name of the file, the author and the saved date (in this panel, the confirmation dialog is not shown).

The panel will send the CC# parameters' values to your Moog Matriarch synth at program load. Nothing will happen if your synth is not connected by Midi/USB or if your synth is on another Midi channel than the one set in the MIDI menu of the panel.



If you want, you can prevent the display of the Load confirmation message (see Panel settings in [Library and Info](#) tab on p2926).

Saving a Moog Matriarch program

The panel loads and saves the program parameters as a 1500 bytes sysex file (.syx) from/to your computer. All buttons, patches, metadata and program settings are saved.

Clicking the **Save** button opens a classical Save file dialog where you can enter the name of the file to save. The last saved filename and path is proposed by default. You will get a confirmation popup if you select an existing file and want to overwrite it.

Once the parameters are saved, the top of the screen displays the name of the file, the author (as set in the [Program settings and Patches](#) tab) and the saved date (thus, the current date) in ISO format yyyy-mm-dd. A confirmation dialog is also shown.

The panel stays on the current tab after a Save is done.



Program Init

Clicking the **Init** button loads the parameters for an Init program that has the following characteristics:

- All parameters at 0 or OFF
- Pitch Mod Assign set to All
- Arp/Seq rate at 5
- Program settings at their default value



Program Rename

Clicking the **Rename** button opens a popup window where you can modify the name of the program. The maximum number of characters for the program name is 20 (it will be truncated if longer).



Please note that the program name can (of course) be different than the file name the program is saved in.

Moog Matriarch tab

In the **Moog Matriarch tab**, you have access to the same parameters as on the actual synthesizer but in a slightly different layout in order to fit nicely on a computer screen but also to some additions:

- Rear panels output patch points
- A series of 12 external input / patch points representing some external gear
- The Glide related parameters

Please refer to the Moog Matriarch user manual

(https://api.moogmusic.com/sites/default/files/2019-09/Moog_Matriarch_Manual.pdf) for the explanations of each encoder/button.



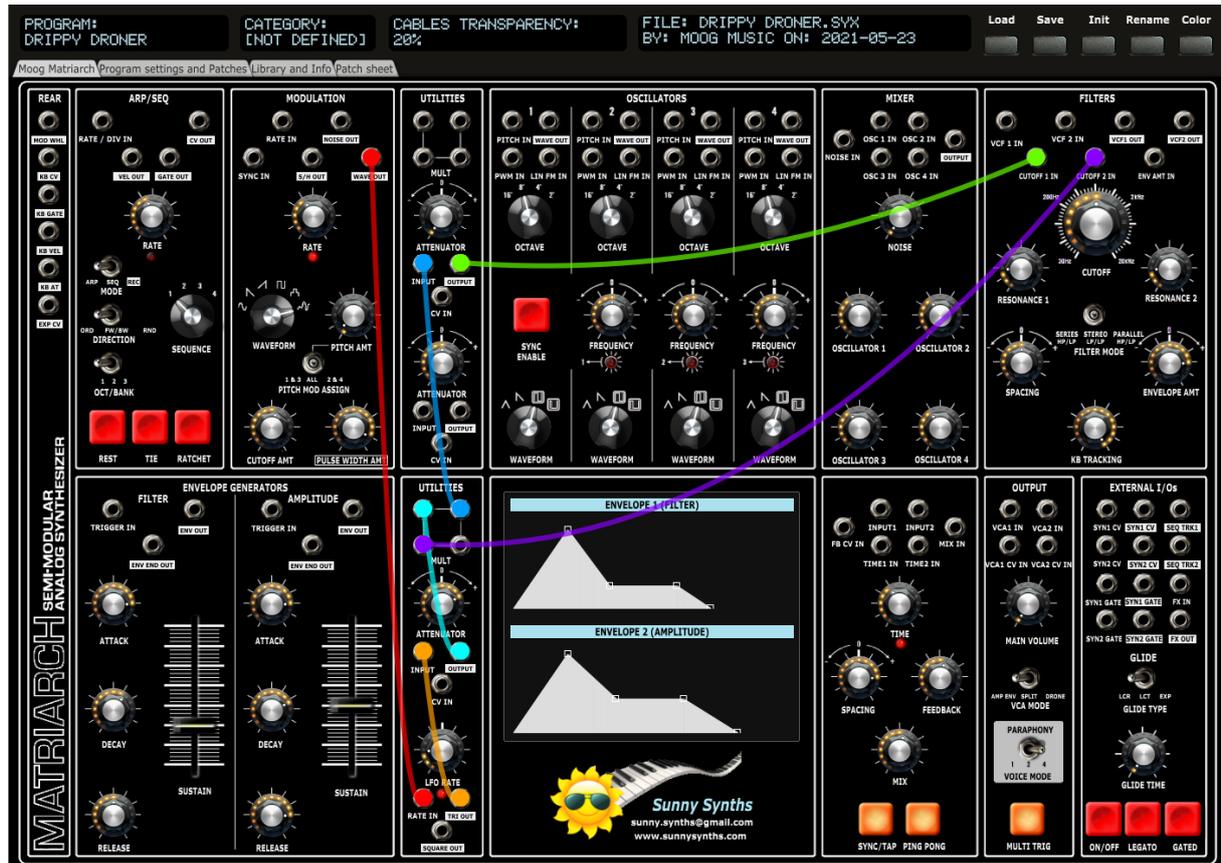
The third top screen is showing the name and the value of the parameter you are modifying.

Doing a single click on any rotary encoder is displaying its name and current value **without that you need to modify it.**

Patch cables drawing

In this tab you can also draw your patch cables.

To draw a patch cable, click on an output patch point, keep the mouse button pressed, drag the cable to a patch input point then release the mouse button.



Depending on the state of the **Cables** button in the **Program settings and Patches** tab, either full cables (**Cables** button ON) or cable plugs (**Cables** button OFF) will be displayed.



As soon as you are using the same input and the same output twice, the Cables button will be locked ON and only full cables will be displayed.

All the patch cables are listed and can be further managed in the **Program settings and Patches** tab.

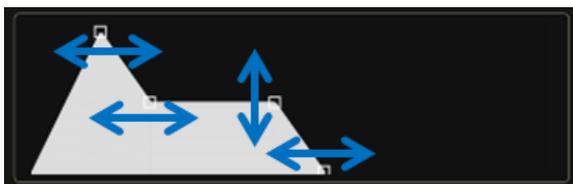
It is always the next free cable that is selected automatically.

You delete an existing cable simply by re-drawing it from its output to its input.

In the **Program settings and Patches** tab you can also adjust the transparency level of the cables.

Envelopes shape

You can modify the envelopes shape by either turning the ADSR encoders or by using the mouse and moving the anchors on the graphs either vertically or horizontally.



When moving the anchors, the corresponding ADSR encoders will also turn and the parameter name and value are displayed in the screen of the top panel area.

Program settings and Patches tab

In the **Program settings and Patches** tab, you can:

- adjust all Arp/Seq parameters (either the ones at program level and handled by CC or the ones handled as Global settings by sysex)
- set/indicate up to 15 from/to patches
- delete a single patch cable or all at once
- switch between the display of patch cables or just cable plugs
- set the cables transparency level
- adapt the name of the external synths and FX chain that could be connected to your Matriarch
- adapt the current program category, author and description (click on the current description to edit it)
- manage a step by step usage description of the program
- manage Program settings (some Global settings saved as part of a Matriarch program):



Arp/Seq settings

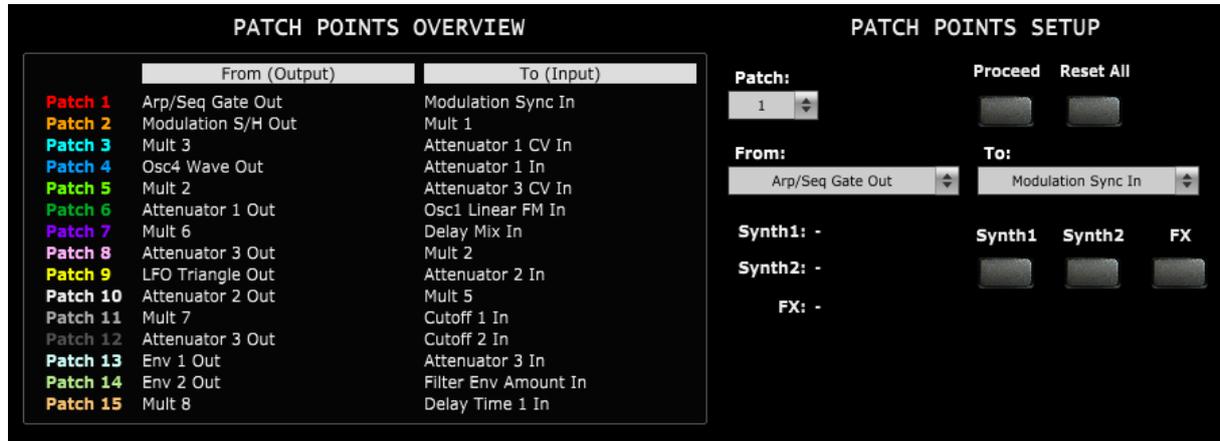
Arp/Seq Program settings are the 4 parameters handled by CC and saved as part of each program.



Arp/Seq Global settings are the less accessible settings for the Arp/Sequencer.

Patch points

Besides drawing the patch cables directly on the front panel, you can also modify the from/to patches as follows:



Clicking anywhere on a patch line (label, input, output, blank space) will select the patch to be modified and display its values in the pull-downs. You modify the **From** source and/or **To** destination and press the **Proceed** button to make the change.

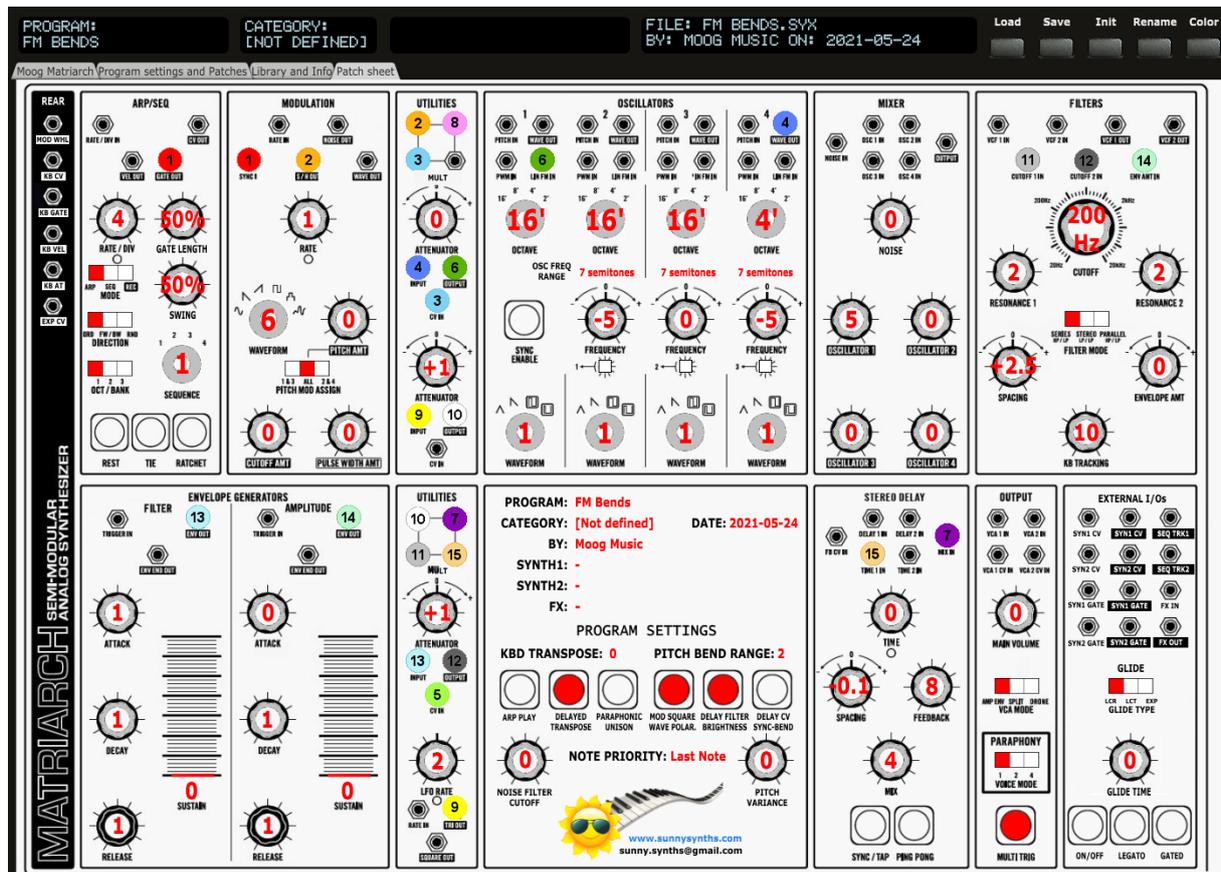
You can also directly select a patch in the Patch pull-down then modify the From/To and press Proceed.

Use the **Unpatch** button to delete a patch cable or the **Unpatch All** button to delete all of them at once.

Use the **Cables** button to switch the display on the main panel between patch cables and just cable plugs. This button will be locked on Cables display as soon as the same input or output is used two times.

Use the **Cables transparency** rotary to set the transparency of the patch cables (not the end plugs).

Patches are numbered 1 to 15 and have a color assigned to them. When a from/to patch is set in the [Program settings and Patches](#) tab, corresponding patch cables are displayed on the main Moog Matriarch tab and corresponding colored numbered circles are displayed on the patch sheet.



Numbered circles are used to help colorblind people.

Available “From” sources are the output patch points of the synthesizer’s main panel, the ones from the rear panel and a few additional external ones: "Not connected", "Synth1 CV output", "Synth2 CV output", "Synth1 Gate output", "Synth2 Gate output", "Sequencer track 1", "Sequencer track 2", "FX Out"

Available “To” destinations are the input patch points of the synthesizer plus a few additional external ones: "Not connected", "Synth1 CV input", "Synth2 CV input", "Synth1 Gate input", "Synth2 Gate input", "FX In"



As described in the manual, the “Mult x” patches can serve as input or as output.

Clicking the **Synth1**, **Synth2** or **FX** buttons opens a popup window where you can modify the name of a synth or FX connected to your Moog Matriarch. The maximum number of characters for those fields is 11 (it will be truncated if longer). If you leave the name empty then a “-” is displayed.

The screenshot displays the Moog Matriarch software interface. The top bar shows 'PROGRAM: FM BENDS', 'CATEGORY: [NOT DEFINED]', and 'FILE: FM BENDS.SVX'. The main interface is divided into several sections:

- ARP/SEQ (Program settings):** Includes 'PLAY' and 'HOLD' buttons, 'Gate Length' and 'Swing' knobs, and various global settings like 'Local Control', 'Arp Midi Output', and 'Send Midi Clock'.
- PATCH POINTS OVERVIEW:** A table listing patch points with 'From (Output)' and 'To (Input)' columns. A dialog box titled 'Synth1 name' is overlaid on this table, showing a text input field with 'Grandmother' and 'OK'/'Cancel' buttons.
- PATCH POINTS SETUP:** A window for configuring a specific patch, including 'From' and 'To' dropdowns, and buttons for 'Synth1', 'Synth2', and 'FX'.
- PROGRAM SETTINGS:** A section on the right with various knobs and buttons for settings like 'Kbd Octave Transpose', 'Pitch Bend Range', and 'Osc 2-4 Freq Knob Range'.

Program settings

In this tab, you can manage twelve Moog Matriarch global settings related to your patch:

- Keyboard Octave Transpose
- Pitch Bend Range
- Oscillator 2-4 Frequency Knob Range
- Delayed Transpose
- Paraphonic Unison
- Noise Filter Cutoff

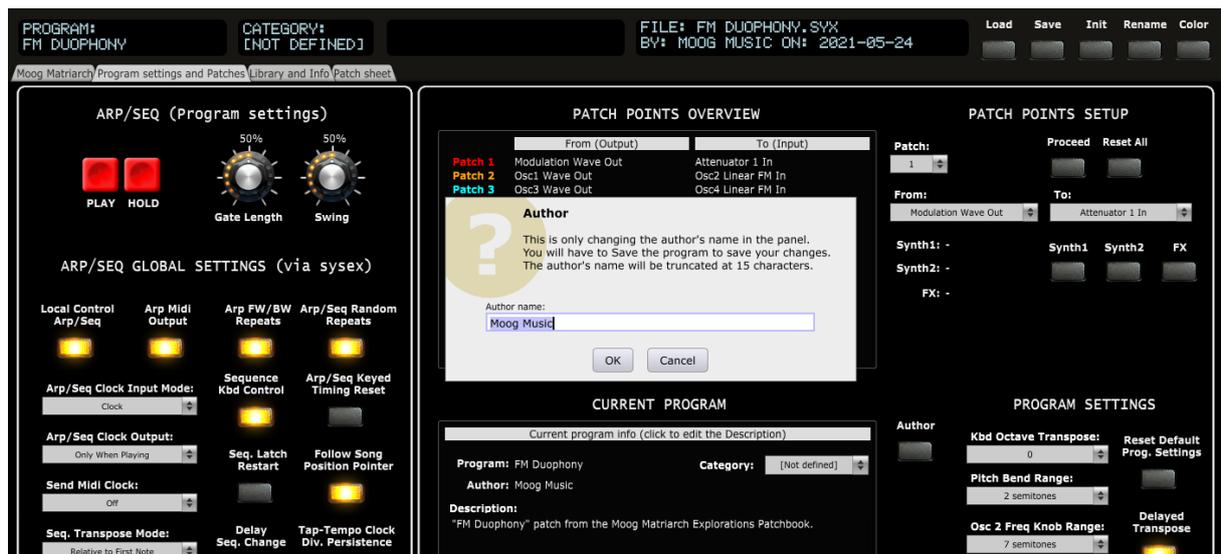
- Pitch Variance
- Delay Filter Brightness
- Delay CV Sync-Bend
- Mod Square Wave Polarity

These settings are saved in each program sysex file and thus loaded with them.

Current program info

Clicking the **Author** button opens a popup window where you can modify the name of the author of the patch. The maximum number of characters for Author is 15 (it will be truncated if longer). If you leave the Author name empty then a “?” is displayed.

You modify the Category of the program by using the Category pulldown.



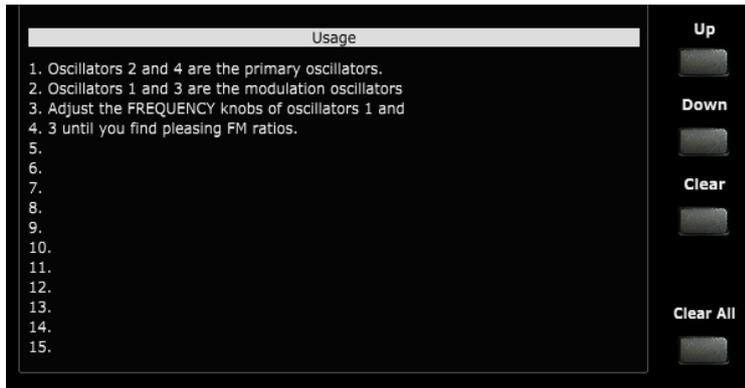
To modify the Description, you need to click on it, modify the text and **not forget to press Enter** before clicking outside the text box.



Both Category and Description are also saved in each program's sysex file.

Step by step usage of the current program

You can manage the description of the usage of the current program by using up to 15 usage steps. For example: gradually increase Resonance, adjust FREQ knob, use Arp... The idea is to be able to illustrate the usage of your sound in a more live environment.



The actions to use the usage steps are:

- double-click on a step line to input or modify a step (max 50 characters by line)
- Use **Up** and **Down** buttons to move a step around
- Use **Clear** or the Delete key to erase a step

Library and Info tab

In the **Library and Info** tab, you have access to:

- the **File Browser** that gives you directly information about the clicked file without having to load it
- the settings when playing a wav file
- the **About** screen giving you information about the panel version and the history of changes
- Panel zoom buttons keeping the zoom factor in memory till next usage of the panel
- the **Display** of all program parameters as a text file with the possibility to export it
- all **Global settings** of the Matriarch except the ones related to the Arp/Seq
- the **Panel settings** as No load at panel load, Welcome message and Load OK Confirm

File browser

The **File browser** allows you to navigate on your disk and browse through presets. Use it as follows:

- **Click** on any file to display some info (name, category, author, saved date, description) about it in the Quick info window. If you click on a non- Moog Matriarch or .wav file then it will be indicated. When Auto Play is activated, clicking on a .wav file will play it automatically for the chosen duration and clicking on an Moog Matriarch .syx file will make the corresponding .wav file play automatically as well (if a wav file with the same name as the Moog Matriarch .syx file is found)
- **Double-click** on a file to load it (Moog Matriarch .syx file) or play it (.wav file) directly. A popup will be displayed if you do this on a not recognized file type
- Use the **Set Root** button to select the folder where your presets are (at this stage, the patch saver doesn't remember the location after you quit it). Note that you must at least have one file in the selected directory in order to have **Set root** functioning.



Sometimes the Set Root doesn't work (displays nothing or stays on the currently selected root directory). I have still not found the reason (thought it was due to no file being present in the folder; only subfolders but seems not to be always the case).

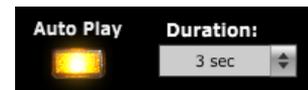
Temporary workaround: just select one level higher. Sorry...

- Use the **Refresh** button to refresh the list after having saved several files or added files outside the patch save
- Use the **Load** button to load the selected file and display its parameters
- Use the **Play** button to manually start playing a .wav file

Audio file play settings



WAV files can be played on Windows and MacOS
AIF, AAC and MP3 can only be played on MacOS



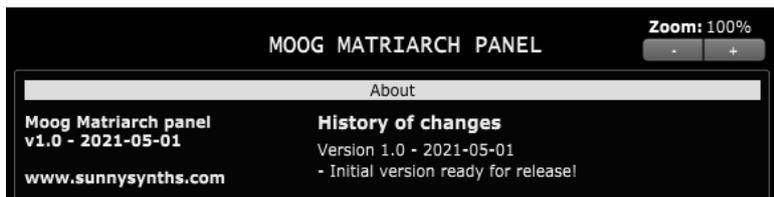
The audio files will be played for the duration set in the **Duration** pulldown (3s, 5s, 10s or Full).

Activating **Auto Play** will automatically trigger the play of the .wav (.aif, .aac, .mp3) files OR trigger playing the .wav file corresponding to the clicked Matriarch .syx file (if found). If there is no corresponding .wav (.aif, .aac, .mp3) file then nothing happens.



If some audio files are playing but not others, check that you are not using special characters in the filename. The panel can handle single quotes but not always other characters.

Panel zoom



The panel can be zoomed by using the Ctrl + or Ctrl – keys combinations. This is also available from the **View** menu.

Using that method is incrementing/decrementing the zoom factor by 10% steps but the main issue (for some users) is that the zoom factor is not memorized and thus at next usage the zoom is back at 100%.

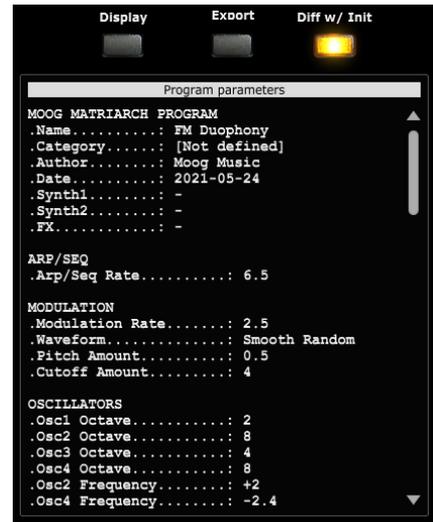
This is the reason of the implementation of this “manual” zoom. Modifying the zoom factor using those buttons is changing the zoom by 5% steps and will make it keep the zoom factor for next usage.

If you are still modifying the zoom using the View menu or the Ctrl + / Ctrl – keys, no worries! The “manual” zoom is reading the current zoom factor on the panel each time one of the main top panel button is used (Load, Save, Init, Rename).

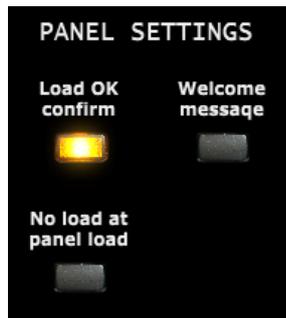
Display and Export info

On the right side of the panel, you have access to Program parameters:

- Use the **Display** button to list the parameters of the current program
- Use the **Export** button to export as a .txt file the parameters of the current program (it is not needed to first display them before exporting)
- Use the **Diff w/Init** switch to limit the display to only the differences with the Init program



Panel settings

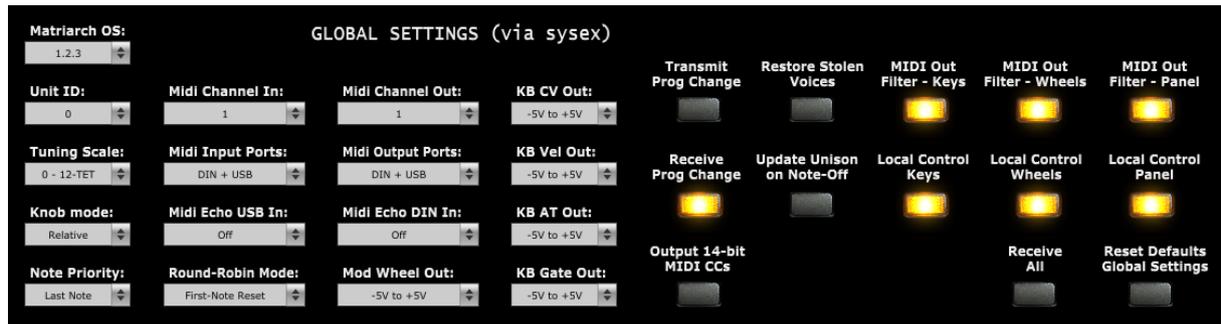


Load OK Confirm: by switching this OFF, there is no confirmation popup shown after loading a program. This avoids clicking on OK.

No load at panel load: by switching this ON, when re-opening the panel, the panel will be left as you closed it in the previous session. By switching this OFF (default), the last saved file is restored if found (or an Init program loaded if not found). Loading a program is also sending all sysex based parameters to the synth.

Welcome message: displays the Welcome message or not when opening the panel.

Global settings



For the moment the Matriarch OS pulldown is not used. It may be used in a coming version of the panel if Moog is doing changes to the Global settings.

Use the **Receive All** button to request all the global parameters from the Matriarch. A request parameter Midi message is sent for each parameter separately one after the other and each reply interpreted one by one to display the value of the parameter.

From there you can modify the parameters individually one by one.

Use the **Reset Defaults** button to reset all values according to their default values (except Unit ID and the midi channels)



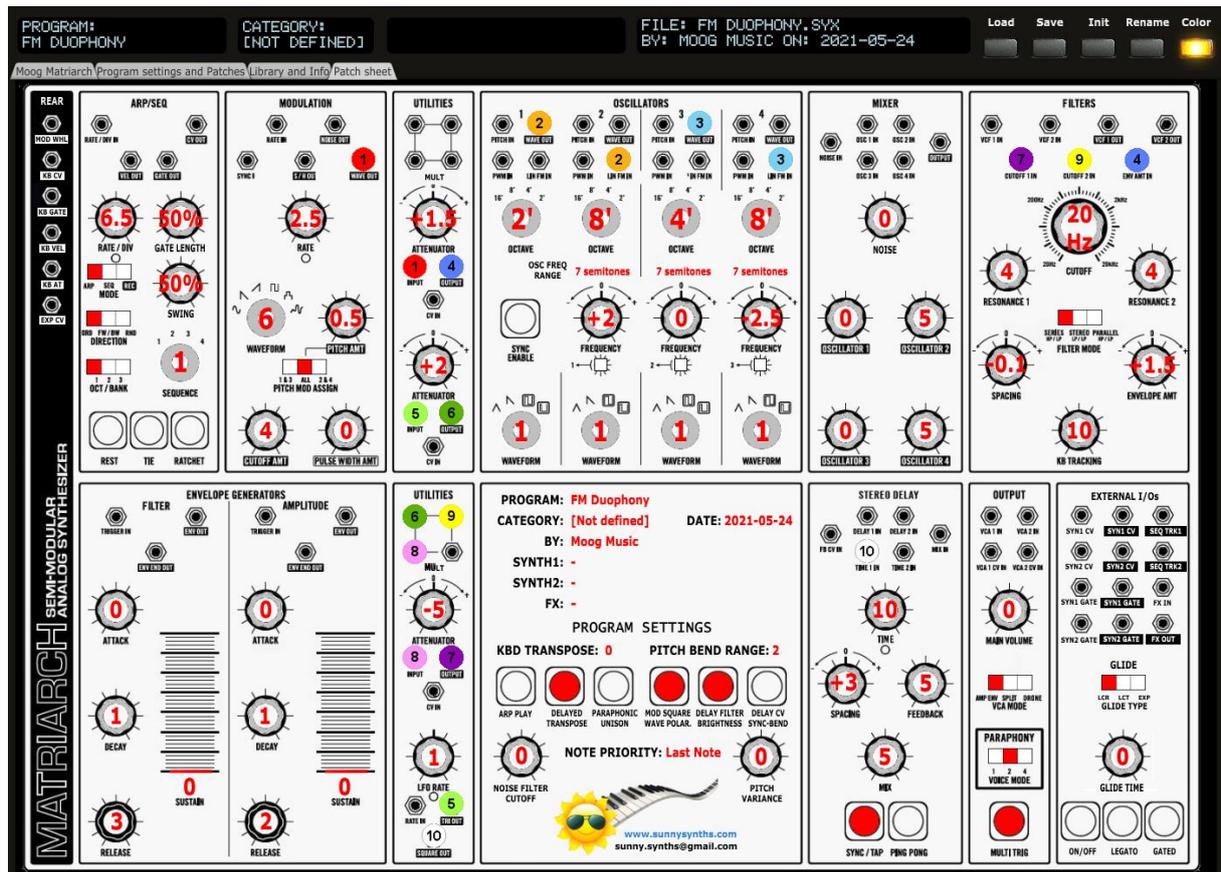
Pay attention when changing the Midi channel as it is not changing the Midi settings of the panel.

You should set the Unit ID to 1 unless you changed it to another value (even if Moog indicates 0 as default value – *confirmation requested to Moog Support but no answer yet*).

Patch sheet tab

In the **Patch sheet** tab, you have access to:

- A one shot view of the values of all parameters, patch cable connections and program info



The content of this tab is adapted automatically. Directly ready for a screenshot!

Installing and using the Matriarch panel as plugin

First of all, thanks to all people that have made some tests and provided feedback from using the plugin with their DAW.

The following paragraphs will provide info on how to install the plugin version of the panel but also describe the way to use it and the known limitations for each DAW.



If your DAW is not listed, please perform some tests as described and send me the equivalent of text and screenshots. I'll add those in the next version of the manual.

Installation

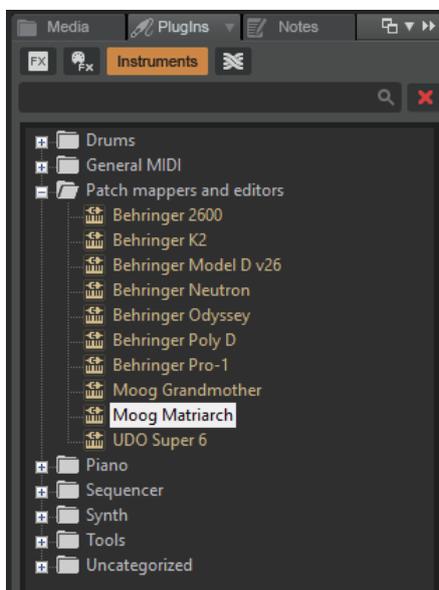
On Windows PC, depending on your DAW version and after unzipping the main file, either copy the **Moog Matriarch.dll** file from the Windows VST 64 bits directory to your 64 bits plugins directory and/or the **Moog Matriarch.dll** file from the Windows VST 32 bits directory to your 32 bits plugins directory (Steinberg hosts often use C:\Program Files\Steinberg\VSTplugins as the default plugin path).

On Mac OS, unzip then copy the **Moog Matriarch.vst** file from the MacOS VST directory to your VST plugin directory (/Library/Audio/Plug-ins/VST) and copy **Moog Matriarch.component** file from the MacOS AU directory to your plugin directory (/Library/Audio/Plug-ins/Component). You will most probably need administrator rights to perform those copies.

On MacOS you may also get the message that the “*Component or VST cannot be opened because the developer cannot be verified*”. Go to [System Preferences](#) then [Security and Privacy](#) and click on the [Open anyway](#) button to have the plugin saved as an exception in the security settings.

Other specific MacOS commands that may be needed to enable the plugin in any OS from Catalina are listed in the Appendix.

Start your DAW and check that the plugin directory is rescanned and that the **Moog Matriarch** panel is visible in your list of plugins. Here is an example in Cakewalk (a light blue scanning popup is displayed as soon as a file is added or modified in the identified 64 bits VST plugins folder):



Tests and identified limitations

Different DAWs have been tested and some way of working presented here.

The following actions are checked:

- Creating a track using the plugin
- Displaying the instrument and checking all controls are working fine including Load/Save...
- Playing a wav file from the file browser. The DAW is often using ASIO while the wav files are played with the Windows or MacOs native player
- Saving and opening a project in the DAW. This is checking that the last patch saved is restored correctly. As in standalone mode, the last patch used is restored (not the last position of the knobs!)
- Creating a second track with the plugin
- Saving and opening a project in the DAW. This is checking that there can be different tracks using the plugin with each of their last patch saved restored correctly.
- Creating a preset in the DAW. Each DAW has different ways to do this. Creating presets can also be done by saving full channel strips that are including the VST instrument setup (Cakewalk, Reaper, Logic)
- Creating a track by selecting a DAW preset instead of selecting the plugin. Checks if the correct patch is restored. When working, this is done by loading a saved channel strip.
- Replacing a DAW preset by another DAW preset



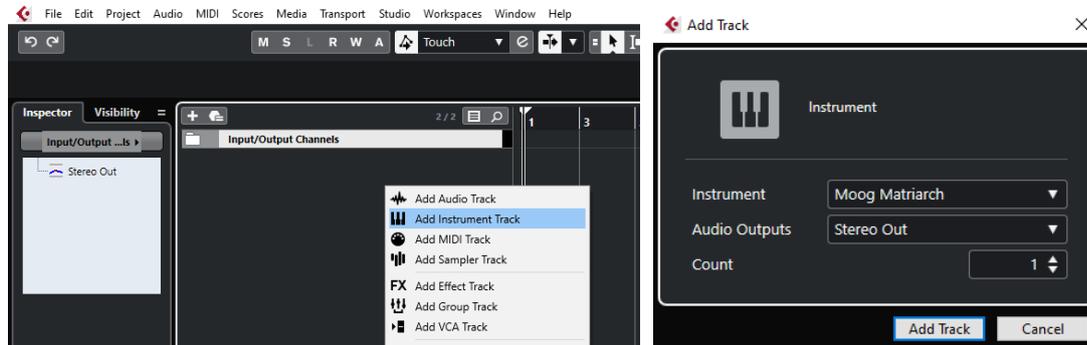
Replacing the DAW preset in a track by another DAW preset is now working fine. The only remark is that you may get some popups if you directly switch between freshly created presets (just click Cancel in those popups). Creating a new track with the plugin and switching between existing DAW presets works fine and doesn't display the popups.

	Cubase	Cakewalk	Reaper	Ableton	Studio 1	Logic
Create track	✓	✓	✓	✓	✓	✓
Using the plugin	✓	✓	✓	✓	✓	✓
Play wav	✓	✓	✓	✓	✗	✓
Save and restore project in DAW	✓	✓	✓	✓	✓	✓
Save and restore project with 2 tracks	✓	✓	✓	✓	✓	✓
Create DAW preset	✓	✓	✓	✓	✓	✓
Create track based on DAW preset (saved channel strip)	✓	✓	✓	✗	✓	✓
Replace DAW preset by another DAW preset	✓	✓	✓	✓	✓	✓

Cubase

Creating a new track

Add an Instrument track by using the Add track menu displayed when right clicking in the middle of the workspace then select the Moog Matriarch VST. Click on the Instrument button to display the panel and use it as you would do for the standalone version.



...or by dragging and dropping from the VSTi panel (easier).



Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Cubase while the wav file player is Windows.

When saving the Cubase project, the panel is saved as well. It will be restored with the last patch used and saved.

Using several Matriarch tracks at once

You can associate the panel to several tracks in order to keep track of the different patches used for them



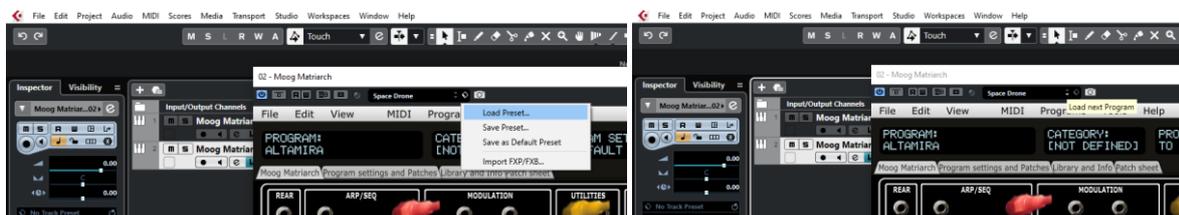
Saving a patch as a Cubase preset

You should save your patches using the Save button **inside** the panel but in addition to that you can also save them as *Cubase preset* or *Cubase track preset*.

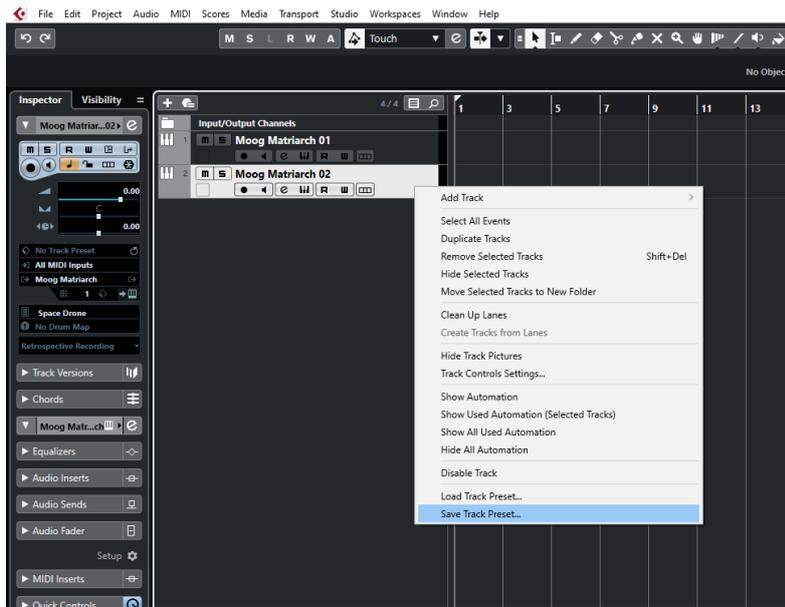
To save as Cubase preset, click on the small diamond to the left of the small camera icon at the top of the plugin window, select **Save preset...** then give a name to your preset.



Later on, you can load a preset by using **Load preset** from the same menu or you can navigate through your presets by using the small up and downs triangle buttons.

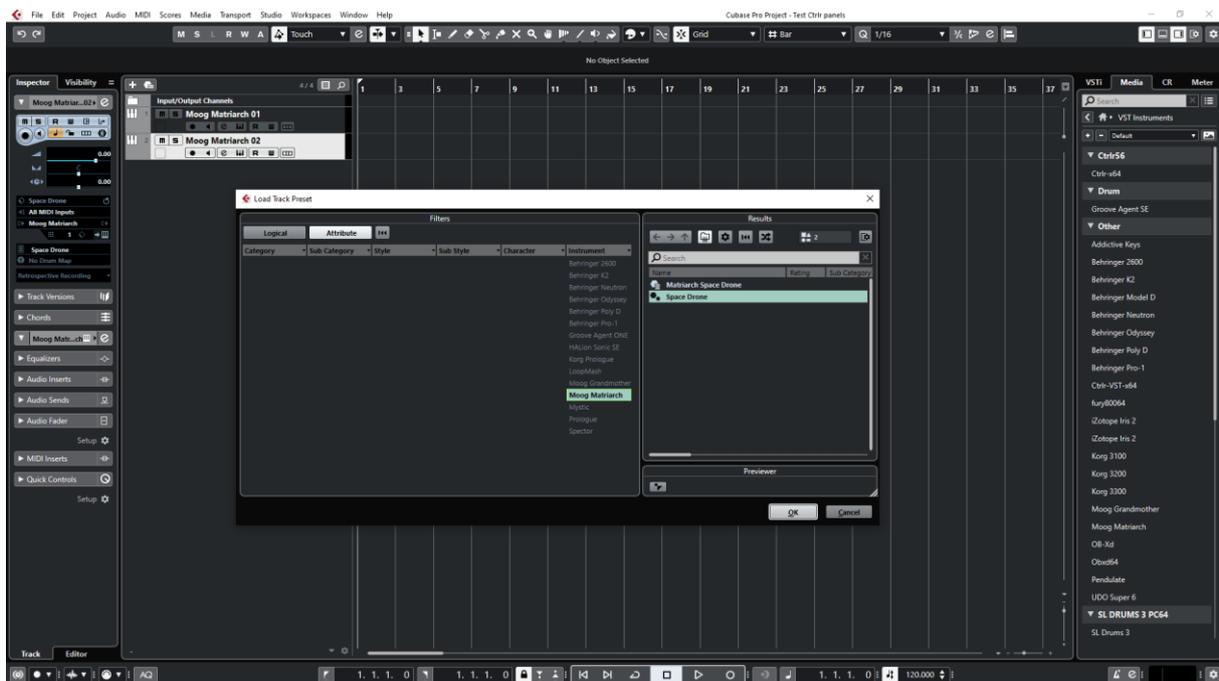


To save as Cubase track preset, select **Save track preset** when right clicking on a track.



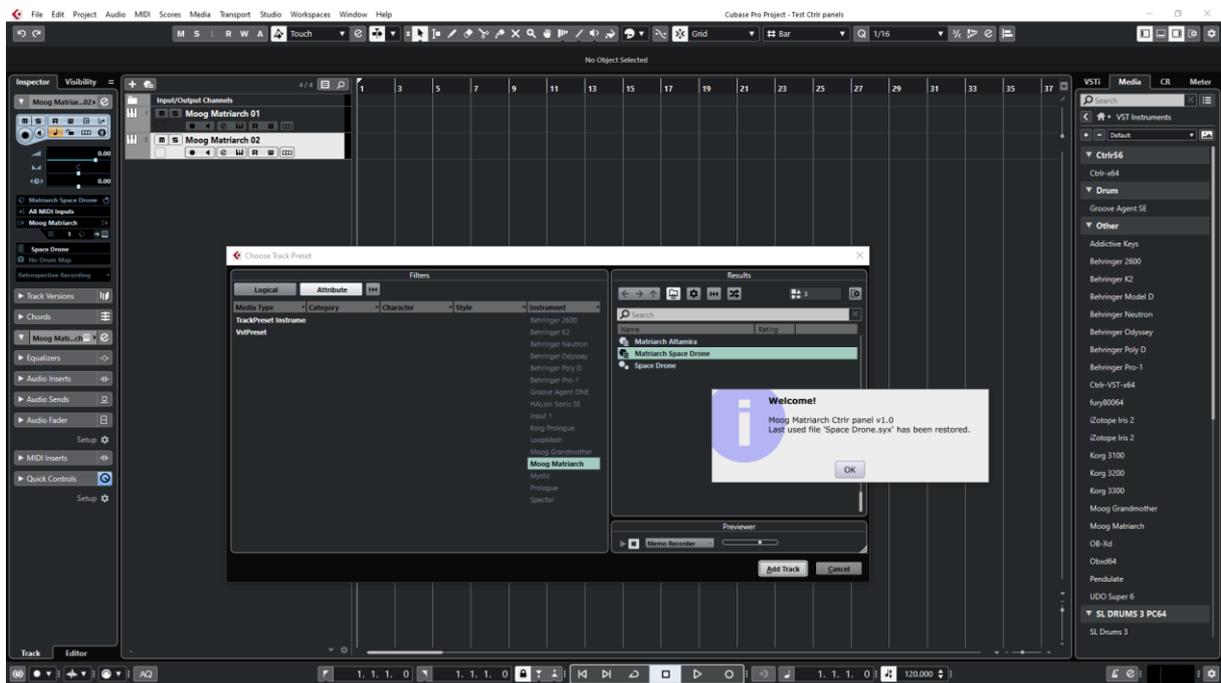
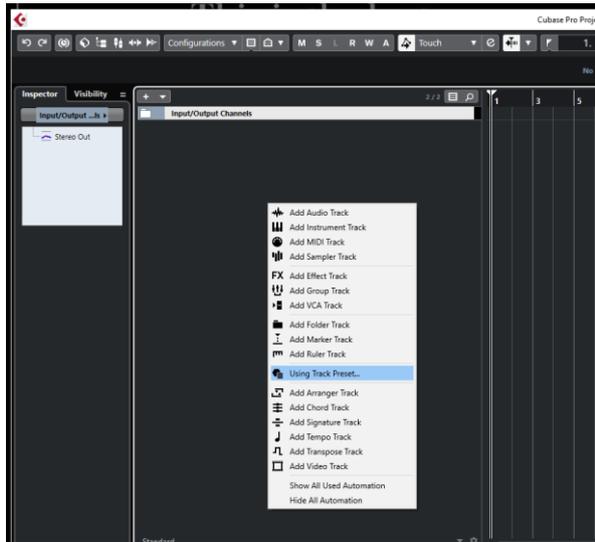
Before saving as track preset, verify that the button **No load at panel load** is set to OFF in the Library and info tab (Global settings) to secure having the preset restored.

Later on, the content of the panel as is can be restored directly in a new empty track without the need of a Load from the panel by selecting **Load track preset** when right clicking on a track.



Creating a new track from a Cubase preset

When creating a new track you can directly pick [Using track preset](#) from the menu. The patch will appear in the panel on a new track without the need of a using Load from the panel



Replacing the preset on an existing track by another preset

Works fine. Just select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded preset; patch cables and all labels will be restored.

You can also scroll through the presets with the small up/down buttons.

Cakewalk by Bandlab

Creating a new track

Drag the Matriarch plugin from the Instruments plugin window (Synths) and drop it on the main window to create a new track.

Click on the instrument icon near the track name to display the panel.



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated with a patch is also working even if ASIO is used as audio driver for Cakewalk while the wav file player is Windows or MacOs.

When saving the Cakewalk project, the panel is saved as well. It will be restored with the last patch used and saved.

Using several Matriarch tracks at once

Works fine. To keep several plugin windows opened at once you need to pin them first (pin icon on top right of a plugin window). Patches and windows are restored when re-opening the project.



Saving a patch as a Cakewalk preset

It is possible to save the current patch as a Cakewalk preset by changing the name at the top of the plugin window (here “Cavern Strings”) then clicking on the Save button.

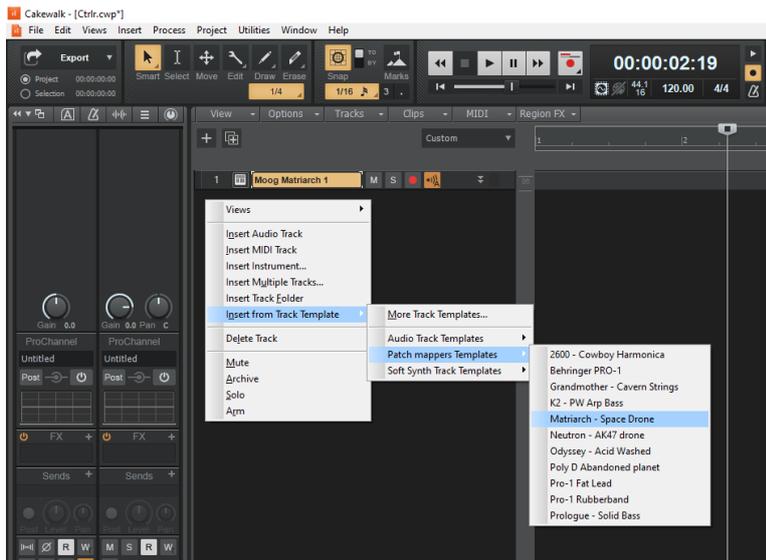


It is also possible to save a complete mixer channel as track template.

Creating a new track from a Cakewalk preset

Not found... It seems it is always needed to first create a track with the instrument plugin and then to select a preset (but this doesn't work – see next paragraph).

Another possibility would be to save each preset as a separate track template then to create the track from those track template “presets”.



Replacing the preset on an existing track by another preset

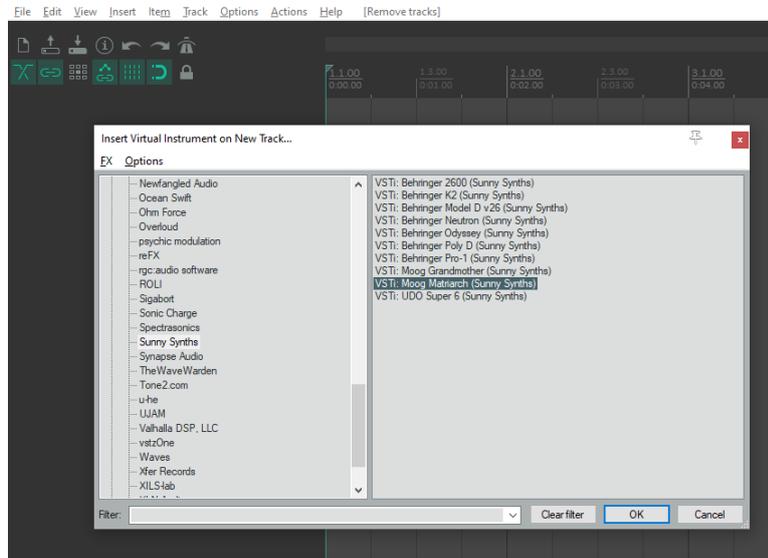
Works fine. Just select another previously saved preset at the top left of the plugin window. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

Reaper

Reaper is available on Windows and MacOS. On MacOS, Reaper is supporting both VST and AU plugin versions.

Creating a new track

Select [Insert virtual instrument on new track](#) in the Track menu then select the Moog Matriarch VST from the VSTi category



Click on the [FX button](#) to display the panel and use it as you would do for the standalone version (right-clicking instead of direct click gives only the plugin window without the blank side area)



Listening to wav files associated with a patch is also working even if ASIO is used as audio driver for Reaper while the wav file player is Windows or MacOS.

When saving the Reaper project, the panel is saved as well. It will be restored with the last patch used and saved.

Using several Matriarch tracks at once

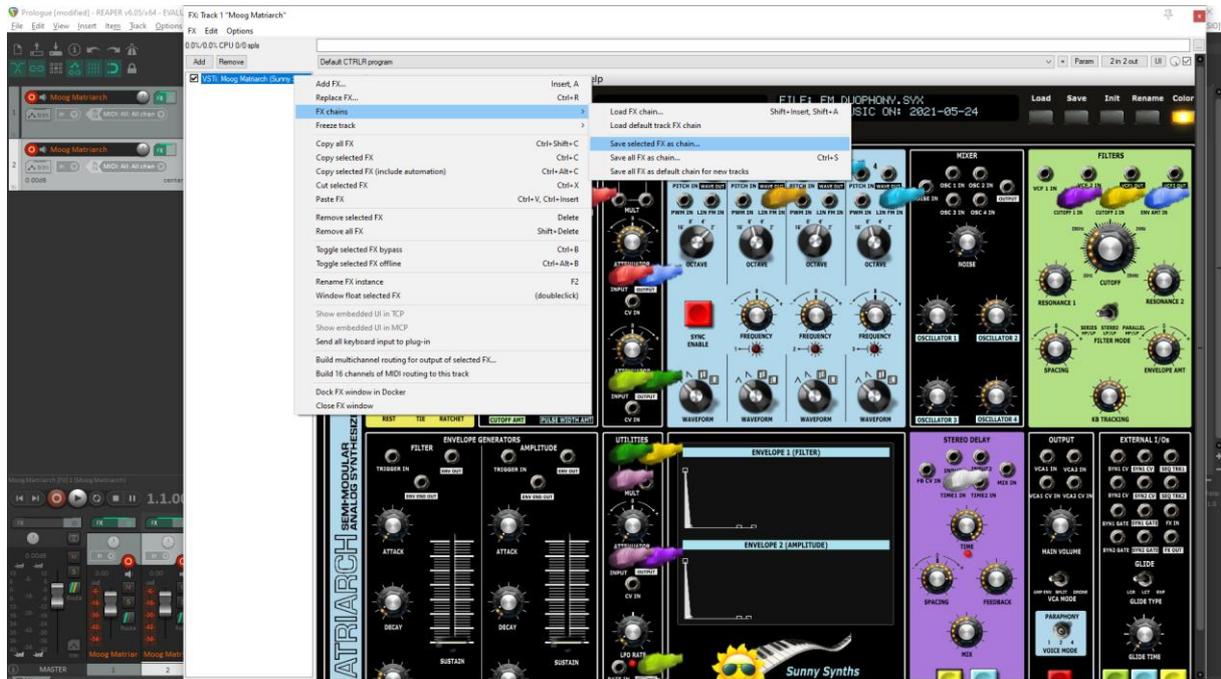
Works fine:



Saving a patch as a Reaper preset

Two different methods are possible:

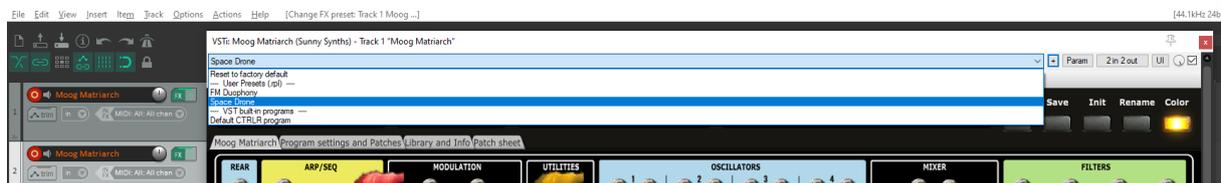
- Save FX chain - Right click on VST name in white area of plugin window then select **FX chain**



- Save preset - Click on the **+ button** in the plugin window then name the preset



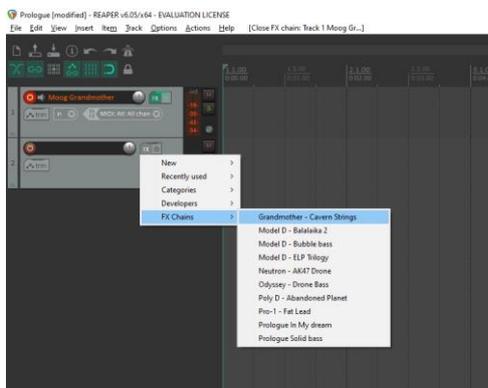
Presets are appearing under User presets



Before saving as track preset, verify that the button **No load at panel load** is set to OFF in the Library and info tab (Global settings) to secure having the preset restored.

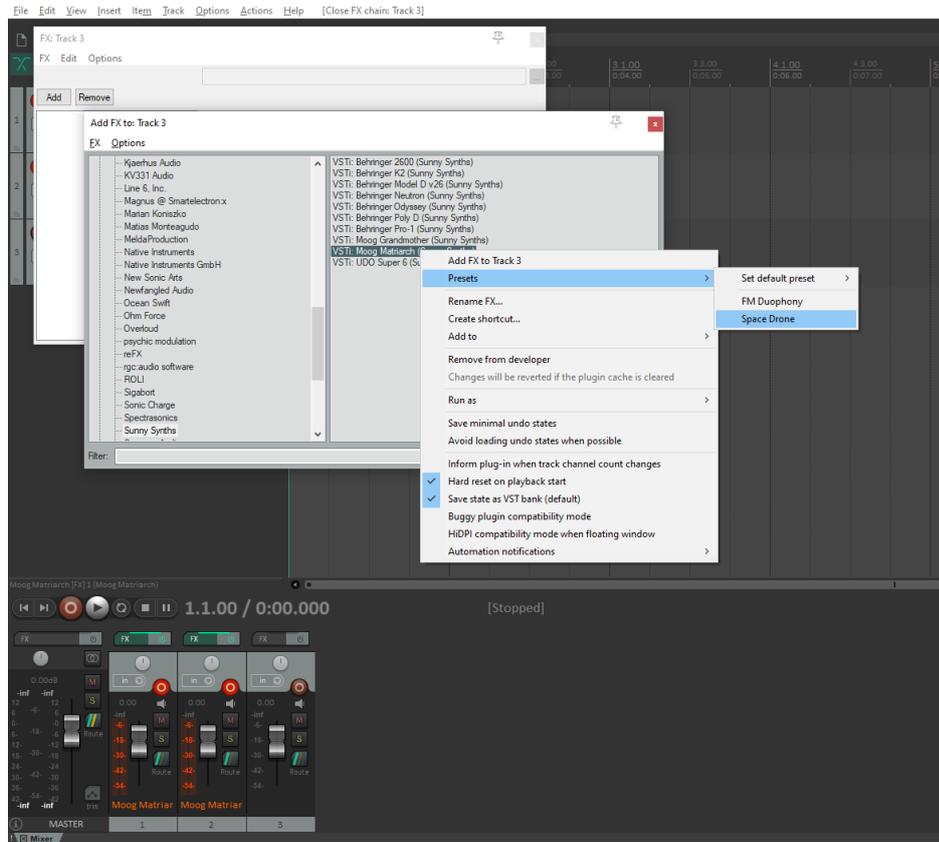
Creating a new track from a Reaper FX chain preset

Create an empty track then right click on grey **FX button** to select a saved FX chain



Creating a new track from a Reaper preset

This is not possible directly but well in two steps. First, create an empty track then click on grey **FX button** to display the Track FX window with the VST plugins list. Then, right click on the Matriarch plugin and select a saved preset under **Presets**



Replacing the preset on an existing track by another preset

Click on the green **FX button** then in the FX track window, select the FX and press the **Remove button**.

Add the new one as described above.

Ableton

Status: This has been tested in Ableton Live Lite 10 and it is thus expected to work fine in the full versions.

Specific remark

In Windows, it is needed to set the main Midi ports of the Matriarch synth to OFF in [Preferences](#) and to set the Midi devices and channels in the panel to allow the communication with the synth for the few parameters that can be exchanged.

This is not required on MacOS that can handle multipoint communication.

Creating a new track

Drag the Matriarch plugin from the plugin browser and drop it on the main window to create a new track.

The panel should open automatically. If not, click on the small wrench icon in the small window at the bottom.



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Ableton while the wav file player is Windows or MacOs.

When saving the Ableton project, the panel is saved as well. It will be restored with the last patch used and saved.

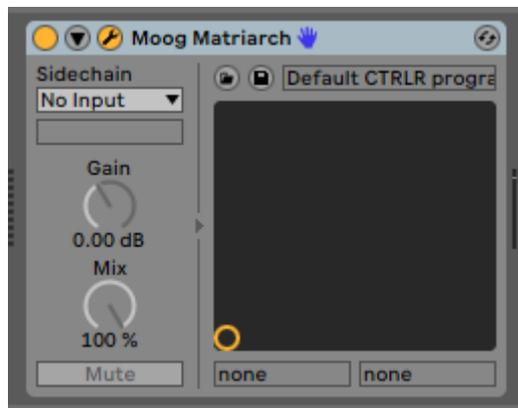
Using several Matriarch tracks at once

Works fine. To keep several plugin windows opened at once you need to change the masking of plugin setup in Preferences. Patches and windows are restored when re-opening the project.



Saving a patch as an Ableton preset

It is possible to save the current patch as an Ableton .fxp preset by clicking on the Save button in the small instrument window at the bottom.



Creating a new track from an Ableton preset

Not found... It seems it is always needed to first create a track with the instrument plugin and then to select a preset (but this doesn't work – see next paragraph).

Replacing the preset on an existing track by another preset

Works fine. Just select another previously saved preset by clicking on the Load button in the small instrument window at the bottom. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

Studio One

Status: This has been tested in Studio One 3.5 32 bits and 4.6 64 bits version.

Playing the wav file associated to a patch seems not working.

Creating a new track

Drag the Matriarch plugin from the plugin browser and drop it on the main window to create a new track.

The panel should open automatically. If not, click on the small Instrument editor icon on the right side of the track name.



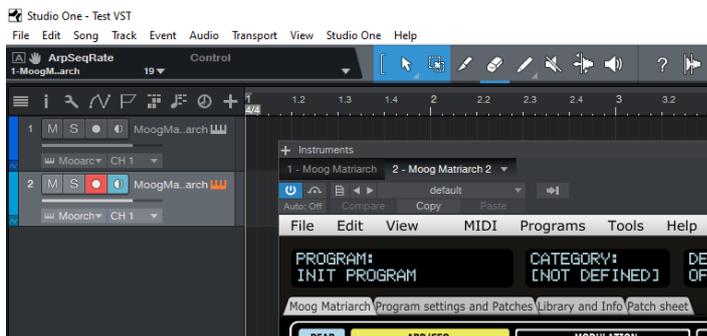
Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is not working even if ASIO is used as audio driver for Studio One while the wav file player is Windows or MacOs.

When saving the Studio One song, the panel is saved as well. It will be restored with the last patch used and saved.

Using several Matriarch tracks at once

Works fine. The instrument editor is showing one tab by track:



Saving a patch as a Matriarch Studio One preset

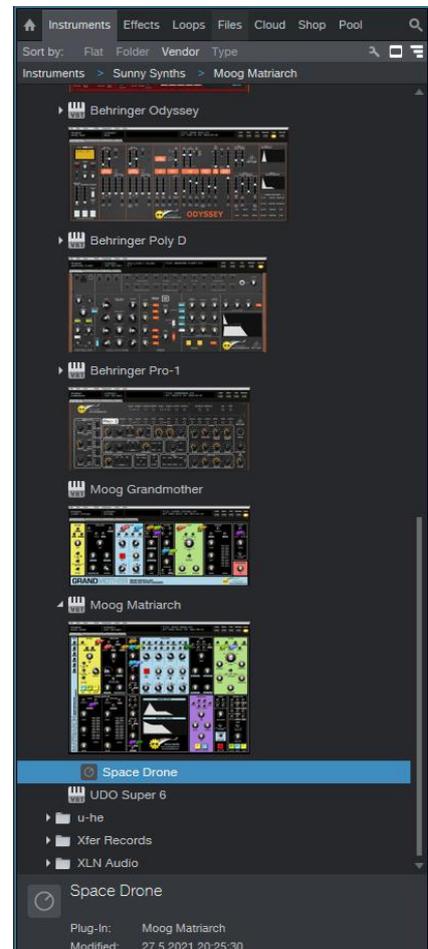
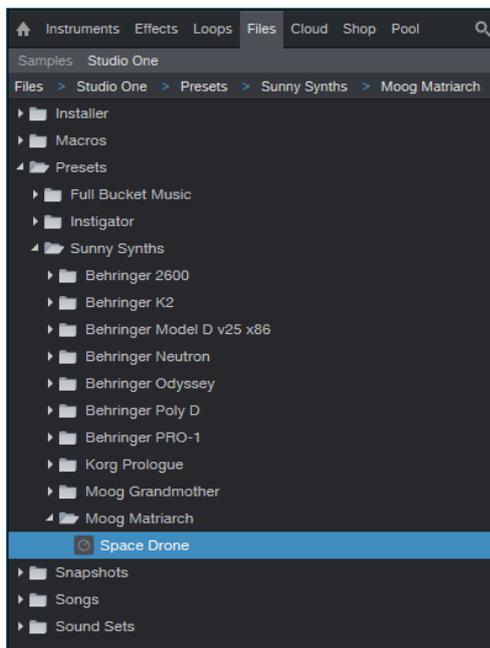
You can save the last patch saved in the panel as a preset in Studio One by selecting [Store preset](#) in the plugin window preset menu.

In the popup menu, input the name of a Subfolder corresponding for example to the sound category.



Creating a new track from a Studio One preset

The presets and their subfolders created with the above method are appearing directly in the browser under the Matriarch VST name in the Instruments tab or in the Files tab



Replacing the preset on an existing track by another preset

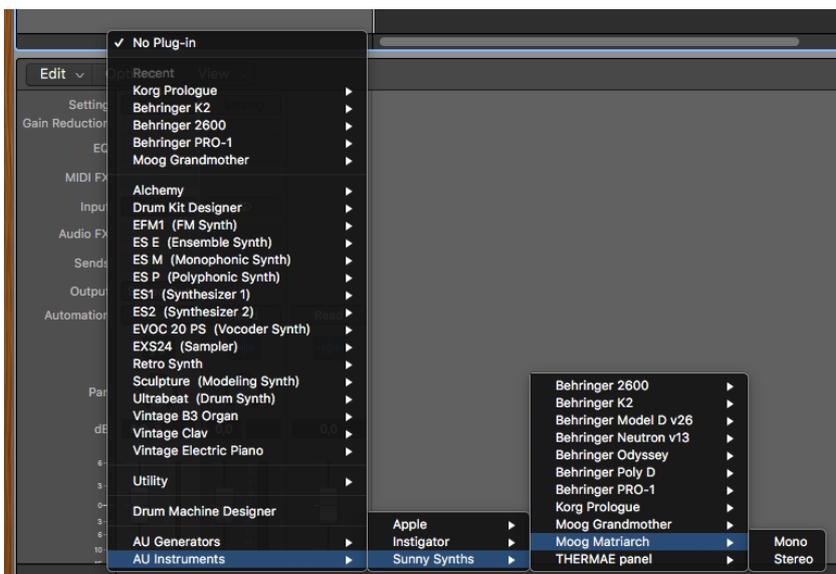
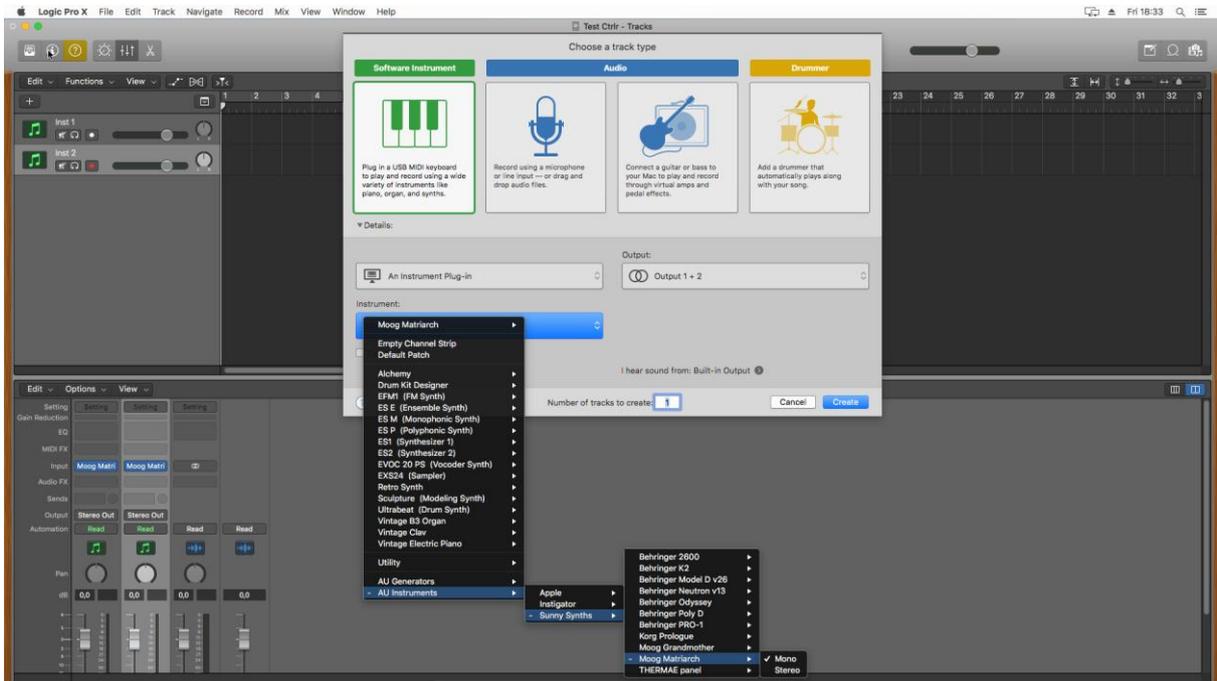
Works fine. Just select another previously saved preset with the pulldown at the top left of the plugin window or with [Load preset file](#). All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.

Logic Pro X

Logic Pro X is only available on MacOS and handles only the AU plugin version so you must secure to have the Moog Matriarch.component instrument plugin file in your AU plugin directory.

Creating a new first track

Create a new instrument track and select the Moog Matriarch plugin for it (under AU instruments) either from the main [Choose a track type](#) window or from an empty track by clicking on the small Instrument editor icon on the right side of the track [Input](#).



Click in the middle of the track Input to open the panel (if it doesn't open automatically)



Load a preset from inside the panel and use it as you would do for the standalone version.

Listening to wav files associated a patch is also working even if ASIO is used as audio driver for Logic while the wav file player is MacOs.

When saving the Logic project, the panel is saved as well. It will be restored with the last patch used and saved.

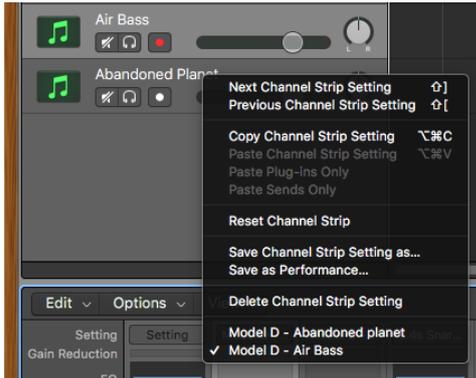
Using several Matriarch tracks at once

Works fine and can be done by simply creating two tracks with the plugin (you may need to zoom)



If wished, one can also create a channel strip:

- Save the Init patch as a channel strip preset in Logic by clicking on the [Setting](#) button at the top of the channel strip in the mixer and selecting [Save Channel Strip Setting as...](#)



- New tracks can be created based on that Init channel strip (see after) and can then be changed afterwards to other patches with the Load button

Saving a patch as a Matriarch Logic channel strip preset

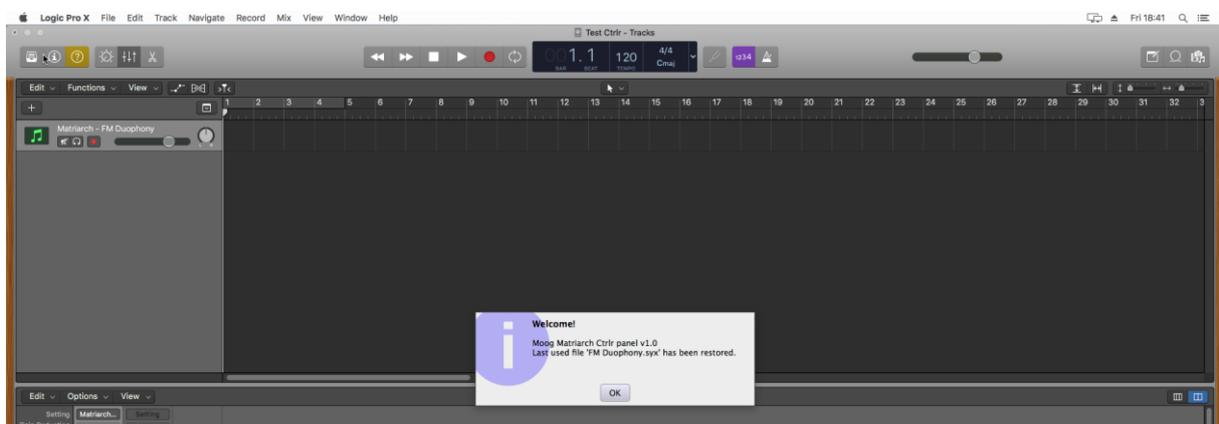
You can save the last patch saved in the panel as a channel strip preset in Logic by clicking on the [Setting](#) button at the top of the channel strip in the mixer and selecting [Save Channel Strip Setting as...](#). Note that this is different than saving a plugin preset.

Creating a new track from a Logic channel strip setting

This is not possible directly but well in two steps. First, create a new Software Instrument track then click on the [Setting](#) button at the top of the channel strip in the mixer and select a previously saved channel strip setting.

Replacing the preset on an existing track by another preset

This is working well when selecting a previously saved .aupreset file. Just select another previously saved preset by selecting [Load](#) in the top left menu of the plugin window. All buttons will be positioned according to the newly loaded preset, patch cables and all labels will be restored.



This is also working fine with Channel Strips Settings. When replaced, a popup indicates that the Last file used “xxx” has been restored.

Using a controller to move the buttons

If you connected a controller like the Novation SL MkII then you can benefit from moving all knobs of the panel from your controller.

This has been achieved by assigning extra Midi CC controller numbers to the knobs not assigned by Moog. **Of course**, as nothing is changed in the hardware, moving those knobs from your controller will not affect the sound as such.

Connect your controller as on following picture:



Controller numbers are the following (in blue the ones assigned by Moog and affecting the synthesizer, in red the extra ones without effect on the synth and only used to handle the panel):

MATRIARCH SEMI-MODULAR ANALOG SYNTHESIZER	ARP/SEQ RATE / DIV 8 91 92 93 REST TIE RATCHET	MODULATOR RATE IN 3 20 21 57 22 23 ENVELOPE GENERATORS AMPLITUDE ATTACK 40 41 42 44 45 46 47 43	UTILITIES MULTI 48 49 50 51 UTILITIES ARP/SEQ Play 73 Hold 69 Swing 14 Gate Length 15 OTHERS 9 Noise Filter Cutoff	OSCILLATORS 1 2 3 4 PITCH IN 74 75 76 77 OCTAVE OCTAVE OCTAVE OCTAVE 80 16 17 18 SYNC ENABLE FREQUENCY FREQUENCY FREQUENCY 81 82 83 24 25 26 27 WAVEFORM WAVEFORM WAVEFORM WAVEFORM	MIXER OSC 1 IN 28 29 30 31 32 OSCILLATOR 1 OSCILLATOR 2 OSCILLATOR 3 OSCILLATOR 4 SYNC / TAP PING PONG	FILTERS CUTOFF 1 IN 33 34 35 39 36 37 38 RESONANCE 1 RESONANCE 2 SPACING ENVELOPE AMT NO TRACKING
	ENVELOPE GENERATORS AMPLITUDE ATTACK 40 41 42 44 45 46 47 43	UTILITIES MULTI 48 49 50 51 UTILITIES ARP/SEQ Play 73 Hold 69 Swing 14 Gate Length 15 OTHERS 9 Noise Filter Cutoff	STEREO DELAY DELAY 1 IN 12 13 52 53 89 88 SYNC / TAP PING PONG	OUTPUT MAIN VOLUME 54 55 94 56 PARAPHONY VOICE MODE MULTI TRIG	GLIDE Type 85 5 Glide Time On/Off Legato Gated 65 87 86	

The main Ctrlr menus

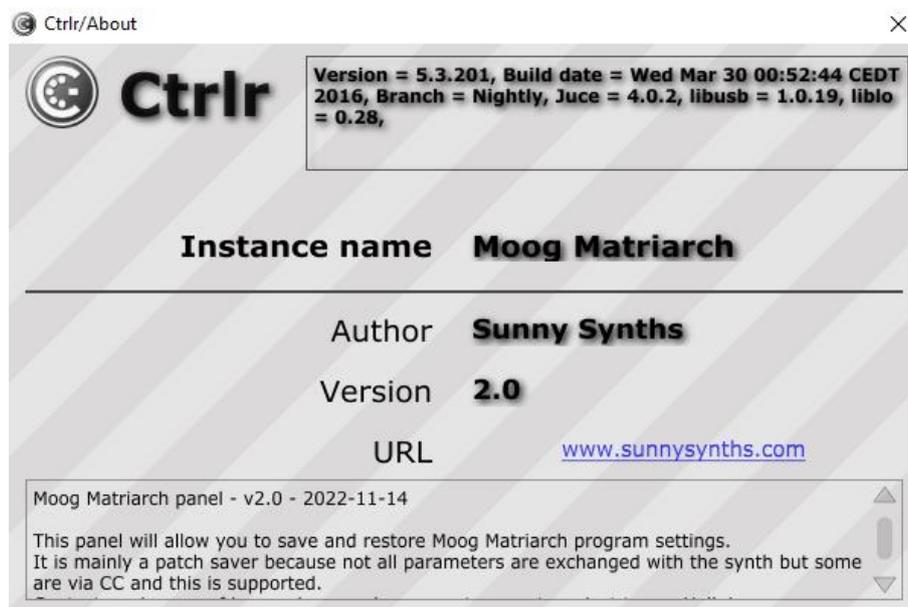
Moog Grandmother



Actually, not so much is used from the Ctrlr menus...

What you can use is:

- **File** menu: Quit is the only option
- **View** menu: allows zooming the panel in and out by 10% steps
- **Midi** menu: to select your Moog Matriarch as Input Midi device and as Output Midi device. Sets the Midi channel
- **Tools** menu: use the Midi monitor popup to verify the messages between the panel and the synth
- **Help** menu: displays the About info of the panel



Appendix

Version history

Date	Version	Description	By
2021-05-30	1.0	First version of this manual	Sunny Synths
2021-12-12	1.1	Audio files, Panel settings, full DAW preset restore	Sunny Synths
2022-11-14	2.0	Patch cables drawing, Ableton Midi port settings	Sunny Synths

Moog Matriarch information

The Moog Matriarch product page: <https://www.moogmusic.com/products/Matriarch>

Specific MacOS setup issues

Developer cannot be verified

On MacOS you may get the message that the “*Component or VST cannot be opened because the developer cannot be verified*”.

Go to [System Preferences](#) then [Security and Privacy](#) and click on the [Open anyway](#) button to have the plugin saved as an exception in the security settings.

For the AU (from a user):

To validate the AU plugin in any OS of Catalina or newer, you’ll need to disable System Integrity checking (the system equivalent of ctrl-clicking the app).

This is done by restarting holding down CMD-R, choose terminal from the top bar menu once logged in to the recovery console, and typing the following command:

```
/usr/bin/csrutil disable
```

It will then stop telling you it can’t be validated and do you want to put it in the bin!

For the VST (from another user)

Just ran the VST on Monterey OS X and it failed. I took my VST and ran 3 commands:

```
sudo xattr -cr  
sudo xattr -r -d com.apple.quarantine  
sudo codesign --force --deep --sign -
```

Opened up my Ableton - everything works like a charm.

Sysex file documentation

Here is the documentation of the sysex file used to store the parameters. It is 1500 bytes long.

```
-- // Moog Matriarch - Sound data sysex structure - Size=1500 bytes v1.0 //
--
-- Offset is what is displayed with HxD Hexadecimal analyser
-- getByte() is also using the Offset to retrieve Bytes from sysex dump
--
-- This is just a structure used to save the data on the computer
-- Nothing official or unofficial from Moog, just a decision made by me ;- )
-- This data is not transferred by Midi
--
-- 100 = 64
-- 127 = 7F
--
-- Offset      | Byte content
-- -----+-----
-- 0000        | F0    Sysex start
-- 0001        | 04    Moog Music ID
-- 0002        | AB    Matriarch (not existing, my choice)
-- 0003        | 01    Sound data
-- 0004        | 00-01 Glide On/Off
-- 0005        | 00-7F Glide Time
-- 0006        | 00-02 Glide Type
-- 0007        | 00-01 Legato Glide On/Off
-- 0008        | 00-01 Gated Glide On/Off
-- 0009        | 00-64 Fine Tune (32=0) - At back of Matriarch. Not stored atm
-- 0010-13     | 00-03 Osc Octave
-- 0014        | 00-01 Osc Sync Enable
-- 0015-17     | 00-7F Osc Frequency (40=0)
-- 0018-21     | 00-03 Osc Waveform
-- 0022-26     | 00-64 Volume (Osc1-4, Noise)
-- 0027        | 00-64 Filter Cutoff
-- 0028-29     | 00-64 Filter Resonance
-- 0030        | 00-7F Filter Spacing (3F=0)
-- 0031        | 00-64 Filter Envelope Amount (32=0)
-- 0032        | 00-02 Keyboard Tracking
-- 0033        | 00-02 Filter Mode
-- 0034-35     | 00-64 Envelope Attack
-- 0036-37     | 00-64 Envelope Decay
-- 0038-39     | 00-23 Envelope Sustain (0-35)
-- 0040-41     | 00-64 Envelope Release
-- 0042        | 00-64 Main Volume
-- 0043        | 00-02 VCA Mode
```

-- 0044		00-02	Voice Mode
-- 0045		00-01	Multi Trig
-- 0046		00-7F	Delay Time
-- 0047		00-7F	Delay Spacing (3F=0)
-- 0048		00-64	Delay Feedback
-- 0049		00-64	Delay Mix
-- 0050		00-01	Sync / Tap
-- 0051		00-01	Ping Pong
-- 0052		00-7F	Mod Rate
-- 0053		00-05	Mod Waveform
-- 0054		00-64	Mod Pitch Amount
-- 0055		00-02	Mod Pitch Mod Assign
-- 0056		00-64	Mod Cutoff Amount
-- 0057		00-64	Mod Pulse Width Amount
-- 0058-60		00-64	Attenuator 1-3 (32=0)
-- 0061		00-64	LFO Rate
-- 0062		00-7F	Arp/Seq Rate
-- 0063		00-02	Arp/Seq Mode
-- 0064		00-02	Arp/Seq Direction
-- 0065		00-02	Arp Range / Seq Bank
-- 0066		00-03	Sequence
-- 0067		00-7F	Arp/Seq Swing
-- 0068		00-7F	Arp/Seq Gate Length
-- 0069		00-01	Arp/Seq Play
-- 0070		00-01	Arp/Seq Hold
-- 0071		00-04	Keyboard Octave Transpose
-- 0072		00-01	Delayed Transpose
-- 0073		00-02	Note priority
-- 0074		00-0C	Pitch Bend Range
-- 0075		00-01	Paraphonic Unison
-- 0076-8		00-18	Oscillator Frequency Knob Range
-- 0079		00-01	Mod Square Wave Polarity
-- 0080		00-7F	Noise Filter Cutoff
-- 0081		00-01	Delay Filter Brightness
-- 0082		00-01	Delay Sync CV Bend
-- 0083-85		00-01	Osc 2-4 Sync
-- 0086-87		0000-0190	Pitch Variance (0-400 2 bytes)
-- 0078-89			Not used
-- 0090-104		00-28	Patch sources
-- 0105-109			Not used
-- 0110-124		00-39	Patch destinations
-- 0125-129			Not used
-- 0130-149			Name (20 characters)
-- 0150		00-10	Category
-- 0151-650			Description (499 characters)
-- 0651-665			Author (15 characters)

--	0666-675		Date (10 characters for ISO date yyyy-mm-dd)
--	0676-678		Not used
--	0679-689		Synth1 (11 characters)
--	0690-700		Synth2 (11 characters)
--	0701-711		FX (11 characters)
--	0712-730		Not used
--	0731-780		Usage line 1
--	0781-830		Usage line 2
--	0831-880		Usage line 3
--	0881-930		Usage line 4
--	0931-980		Usage line 5
--	0981-1030		Usage line 6
--	1031-1080		Usage line 7
--	1081-1130		Usage line 8
--	1131-1180		Usage line 9
--	1181-1230		Usage line 10
--	1231-1280		Usage line 11
--	1281-1330		Usage line 12
--	1331-1380		Usage line 13
--	1381-1430		Usage line 14
--	1431-1480		Usage line 15
--	1481-1498		Not used
--	1499		F7 End of sysex

